

INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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REPORT

SUBJECT Repair Ships of the PM Class Built in East Germany for the USSR

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a 10-page report on the repair ships of the PM class built in East Germany at VEB Elbwerft, Boizenburg/Elbe, for the USSR. The report includes a description of the vessels of the PM class, data on vessels of this class which have been launched since 23 December 1958, and a sketch of a vessel of the PM class.

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New Repair Ships of the PM Class

1. In early March 1960, the tenth repair ship constructed for the Soviets in series construction by VEB Elbe Shipyard in Boizenburg was commissioned. The vessel has the designation "PM-1110". The type was built according to designs drawn up by Soviet-Zone engineers. It is the prototype for a series of twenty ships without propulsion and an improved series of 30 ships with propulsion which were also ordered by the Soviets. Doubtlessly the big Soviet repair ship NEVA was the model for this type with only some alterations having been made in view of the planned use of the ship.
2. The ship has a fully-welded body and has about the shape of a trawler. It has a main deck and two superstructure decks. Estimates for main dimensions are:

Overall length	50 m
Molded beam	12 m
Draft	2.50 m
3. A pivot substructure with gear rim is installed at the forward edge of the first superstructure deck. A modern deck crane with a carrying capacity of 1.5 tons and a large radius is to be mounted on this substructure. Machines and bulky spare parts can be taken aboard through two-wing doors at starboard of the second superstructure deck. Heavy but smaller pieces can be lowered into the main repair shop through a skylight or into the forge below through a hatch in the first superstructure deck by means of a crane.

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Most of the room is taken up by the main repair shop and its numerous machine tools. A trolley mounted at the ceiling hauls the working parts to the following machines:

- 1 7-meter heavy-duty turning lathe
- 3 heavy-duty turning lathes of different lengths
- 1 heavy-duty planer
- 1 large milling machine corresponding in size to the 7 m heavy-duty turning lathe
- 1 large drilling machine
- 1 large steel saw with an about 50 cm long blade
- 1 grinding machine
- 1 cutting machine for various sections (round, angle, U and T sections)
- 1 metal spraying machine
- 1 billet shears

An engineer of the ship remarked that a somewhat larger grinding machine should have been chosen.

4. All machines are of Soviet Zone make. As a brand, they bear the letters MWM, abbreviation of "Werkzeugmaschinenwerke" (machine-tool plants). Several machine-tool plants have been merged under this collective name. The machines bear also the brands of these firms, though they are less obstrusive, e.g. BWF on the turning lathes. Very large-size shafts can be turned on the 7-m heavy-duty turning lathe. The electrical metal spraying machine is used for steel, copper, brass, aluminium etc. and is used for the spraying of bearing boxes and the restoring of worn metal parts.

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5. The carpenter's shop is located at portside. In addition to wood-working machines of latest design it contains a turning lathe, a circular saw, a band saw and three carpenter's benches. Behind the main workshop at portside, two mobile welding converters, two stationary welding converters, four regulators and three oxygen containers are located. A small workshop for radio and navigational devices is located adjacent to this room. Besides some measuring devices and a small drilling machine, an electric coil winder is available.
6. The vessel has a very well equipped forge, with an oil-fired melting pot holding about 100 l in the center; the melting pot was made by SCHMITZ & APPEL in Wuppertal. Mazout is used as a fuel. It flows to the burner through a preheater and a heater. Besides the oil-fired melting pot there is also an electrically heated melting pot which is mainly used for nonferrous metal. Additional equipment of the forge included:
- 1 drying furnace for molds of the molding shop
 - 1 muffle furnace (tempering furnace)
 - 1 relatively large forge furnace with blower and airing
 - 1 large perforated iron plate for bending installation and for the casting molds
 - 1 large electrical forge hammer
 - 1 anvil
 - 1 large surface plate.

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7. The numerous electrical machines are powered by three diesel plants with an output of 100 HP each, and one diesel plant with 25 HP with a direct-current converter (380 V). These diesel plants were manufactured by VEB Diesel in Rostock. In addition, the engine room contains a pressure tank with compressor, which supplies the various pneumatic tools and the starting device of the diesel engines. A very small room for the auxiliary boiler is located adjoining to the boiler room. At first, the temperature had risen to more than 60° Celsius there; the temperature could be reduced to 25° Celsius by the installation of an airing. The rooms are heated by a shell-type boiler with [redacted] burner which was constructed under license [redacted]. This boiler supplies also steam for steaming out of small supply tankers. The required equipment is said to be available. A fresh water plant is installed in front of the heating room so that the ship need not carry any fresh water supplies. A lifting installation for small vehicles with unknown carrying capacity is installed at the stern of the vessel.

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8. Berths for two and four men respectively are on all decks. An infirmary with one bed is available. The ship is equipped with an automatic carbon dioxide and foam fire extinguishing installation (F-3).

Comment. The first ship was launched on 23 December 1958 and came to Stralsund for final fittings on 5 August 1959. The 12th ship was observed [redacted]

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[redacted] Dates set for delivery to the USSR are not known. A total of 20 ships are to be completed by late 1960. [redacted]

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a. PM-1101 (562 GRT/325 NRT)

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b. PM-1102 (562 GRT)

c. PM-1103 (562 GRT)

d. PM-1104 (562 GRT)

e. PM-1105 (562 GRT)

f. PM-1106 (562 GRT)

g. PM-1107 (562 GRT)

h. PM-1108 (562 GRT)

i. PM-1109 (562 GRT)

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k. PM-1110 (562 GRT)

l. PM-1111 (562 GRT)

m. PM-1112 (562 GRT)

the type can be described as follows:

Overall length 66 m; length between perpendiculars 62 m; beam 11.47 m, freeboard 3.2 meters, estimated draft 2.5 m; no self-propulsion, 56 berths, 2 steam boilers of 30 square meters heating surface for use aboard and steaming-out of tankers. Two diesel generators (DG-100/1) with 230 V alternating current, 100 kW each; one diesel generator (DCZ) 230 V alternating current, 14 kW; electrical connection to the shore available. Two electrical compressors of 6 and 2.5 cubic meters/min respectively, two converters (230 V alternating current/220 V direct current) 20 kW each, for the captains, two fire extinguishing rotary pumps, two ballast water piston pumps, and fuel pumps.

The following workshops are available:

forge
molding shop
copper foundry
copper casting department
main workshop with fitter's shop and lathe work shop
wood-working shop with molding department
electrical workshop with mounting department, rewinding department and repair department
gas and electric welding shop
painter's shop
workshop for the repair and recharging of accumulators
repair shop for radio equipment

In addition, there are an infirmary, a dispensary, a laundry and several holds.

The following home ports have as yet become known:

PM-1101	ROSTOV	PM-1104	NAKHODKA
PM-1103	KORSAKOV	PM-1105	MURMANSK
		PM-1108	VLADIVOSTOCK

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[REDACTED]

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[REDACTED]

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If the repair ships were also used for submarines, the remaining units would presumably be distributed as follows:

Arctic Ocean	8
Baltic	5
Black Sea	1
Albania	1

These estimates are only assumptions [REDACTED]

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The designations of the ships - PM-1101 through PM-1112 - were derived from the Russian "Plavutsaya Masterskaya - floating workshop".

For sketch of repair ship, see Annex.

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